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ABSTRACT

A study analyzed argumentative essays written to both friendly and hostile audiences by 40 randomly selected college undergraduate students and 12 randomly selected college-bound high school seniors. After holistic rating, papers were analyzed for degree and kind of audience activity and were also independently evaluated for writers' levels of intellectual performance on the Perry Scheme. Results showed level of intellectual development to be a more significant predictor of holistic paper scores than demographic variables. Significant relationships were found between writers' audience activity, holistic paper scores, and Perry Scheme score. Six variables--friendly- and hostile-audience strategy and response (a dialectical measure), Perry Scheme score, and grade-level--predicted significantly for paper scores. After backwards selection, friendly-audience strategy and Perry Scheme score predicted most significantly for the friendly-audience paper and hostile-audience response, Perry Scheme score, and grade level for the hostile-audience paper. The hostile-audience paper evoked the most dialectical activity. (Three tables of data and a figure are included, and 50 references are attached.) (Author/JK)

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The Impact of Friendly and Hostile Audiences on the Argumentative Writing of a Group of High School Seniors and College Students: A Perry Scheme Perspective

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Abstract

This study analyzed argumentative essays written to both friendly and hostile audiences by high-school seniors and college undergraduates. After holistic rating, papers were analyzed for degree and kind of audience activity and were also independently evaluated for writers' levels of intellectual performance on the Perry Scheme. Results showed level of intellectual development a more significant predictor of holistic paper scores than demographic variables. Significant relationships were found between writers' audience activity, holistic paper scores, and Perry Scheme score. Six variables--friendly- and hostile-audience strategy and response (a dialectical measure), Perry Scheme score, and grade-level--predicted significantly for paper scores. After backwards selection, friendly-audience strategy and Perry Scheme score predicted most significantly for the friendly-audience paper and hostile-audience response, Perry Scheme score, and grade level for the hostile-audience paper. The hostile-audience paper evoked the most dialectical activity.

The Impact of Friendly and Hostile Audiences on the Argumentative Writing of a Group of High School Seniors and College Students: A Perry Scheme Perspective

Since the 1960's, numerous studies have shown that significant intellectual development takes place not just in childhood, as was originally believed, but also during the college years. The work of Erikson, Kohlberg, Loevinger, and Perry is especially well known in this area. Some schemes of adult development trace psychosocial growth while others explore cognitive change, but all models describe a movement throughout young adulthood from relatively simple to complex thought and functioning (Chickering, 1969; Erikson, 1963; Gilligan and Murphy, 1979; Heath, 1968; Harvey, Hunt and Schroder, 1961; King, Kitchener, and Wood, 1985; Knefelkamp, 1974; Kohlberg, 1969; Kurfiss, 1976; Loevinger, 1976; Perry, 1968; also see Hays, 1987).

One developmental model of special interest to writing researchers is William Perry's scheme of intellectual and ethical development during the college years (1970). The Perry Scheme chronicles the development of what Kitchener calls "epistemic cognition," or "the processes an individual invokes to monitor the epistemic nature of problems and the truth value of alternative solutions. It includes the individual's knowledge about the limits . . . [and] certainty of knowing . . . , and the criteria for knowing" (1983, pp. 225-226). Such reasoning appears to be a prerequisite for higher-level moral, psycho-social, and ego development (Gilligan, 1981; Weathersby, 1981). Specifically, the Perry Scheme "describes the steps by which students move from a simplistic, categorical view of the world . . . to a

realization of the contingent nature of knowledge, relative values, and the formation and affirmation of their own commitments" (King, 1978, p.38). And despite the bad press that "relativism" is receiving, the term does not, Allan Bloom to the contrary (1987), mean that all ideas are equal but, rather, that ideas are weighed in relationship to one another. The "all ideas are equal" posture typifies what Perry calls "multiplicity," and is a way-station on the road to intellectual maturity, not a final destination.

Perry's model is potentially useful for illuminating students' argumentative writing, especially those Perry Scheme descriptors related to epistemology, ontology, and reasoning style. More specifically, the Perry Scheme has relevance for the study of audience adaptation since in part it describes the maturing student's gradual awareness of tenable viewpoints other than her own. Recognizing the relativism of knowledge and its dependence upon context means not only recognizing what information readers must have to understand the writer's message but also knowing that others don't necessarily share one's assumptions, that these assumptions must, therefore, be clarified and supported. It also means that one must expect questions and objections from those who think differently. Thus a writer wishing to communicate clearly must anticipate her reader's responses to what she writes. This inferring of readers' needs, values, and perspectives is fundamental in the shift from "reader-based" to "writer-based" prose (Flower, 1969).

Research about Perry Scheme performance and audience adaptation in college-level writing also relates more generally to the issue of students' critical thinking abilities, a topic that has, recently, interested secondary and postsecondary educators. All adult develop-

ment involves the learner's construction of increasingly complex cognitive structures as she responds to her social context. Haan suggests that the clash of socially originating conflicting moral and ethical perspectives leads individuals to develop morally and intellectually (1975). Basseches argues that mature critical thinking is dialectical, that it moves beyond Piaget's formal operations to the ability to examine critically one's own ideas from various perspectives, particularly antithetical ones (1984). Such an internal dialectic characterizes the upper stages of Perry's model and leads to a posture that acknowledges opposing viewpoints and the complexity of issues while still achieving provisional resolution of those issues, knowing that this resolution may be open to question as new information or insight becomes available.

In the same way, many writing researchers believe that writing is a social-contextual process, and several studies indicate that subjects who test at higher levels of socio-cognitive development perform better on argumentative writing tasks than those who test at lesser ones (Kroll, 1984a; Rubin and Pichè, 1979; Rubin and Rafoth, 1986; Rubin, Pichè, Michlin, and Johnson, 1984). College students may, as Kroll (1984b) has suggested, have difficulty writing for certain academic or other readers because they lack experience with such readers and contexts, but it may also be that this lack has denied them the opportunity to develop cognitive structures to support such performance. If, as seems likely, these structures or dialectical abilities originate as literal internal dialogues between the thinker and one who might question or oppose her, writers' performances in formulating arguments for oppositional readers might well reflect

their levels of dialectical thinking ability; common sense alone suggests that successful argumentative-writing performance depends upon the writer's conceptualizing views that question her own perspective and then accommodating and rebutting those views in constructing her arguments.

In the study to be described here, the researchers examined the effects of friendly and hostile audiences upon argumentative writing, looking especially at the ways in which subjects adapted their writing to these audiences and how these adaptations were related both to their overall writing performance and their levels of Perry Scheme performance, as assessed by trained raters. Subjects' demographic characteristics were also examined for linear associations of age, educational level, gender, and academic field to both writing performance and Perry Scheme performance. The latter analyses were used primarily to control for any background characteristics contributing to writers' performances.

Methods

Subjects

The study involved 52 subjects: 24 freshmen and sophomores (46%), 16 juniors and seniors (31%), and 12 high school seniors (23%); 29 subjects were liberal arts (56%), 12 business (23%), and 11 engineering majors (21%). Median age was 20, with a range of 16-36; a few subjects were over 36. Approximately half of the sample was female, half male. This cohort was randomly selected from a larger sample of 131 subjects: 62 college freshmen and sophomores (47%), 33 juniors and seniors (25%), and 36 high school seniors (27%). Descriptive statistics were performed on both cohorts. Cell distributions of the demo-

graphic variables showed comparability between the two cohorts, suggesting that the random sampling of the 52 subjects was successful.

High school subjects were randomly chosen from college-bound English classes in a local public high school; all qualified for admission to the University of Colorado at Colorado Springs. College students were regularly-admitted undergraduates at the University of Colorado at Colorado Springs, an urban commuter campus. The researchers relied upon admission requirements, which included either a composite ACT score of 23 or above or a combined SAT score of 1000 or above, to ensure subjects' minimum academic performance levels. Subjects were recruited from names generated by a computerized systematic random-selection process. The final sample included 76 Liberal Arts (58%), 20 Engineering (15%), 26 Business (20%) and 9 undecided (7%) majors. High-school subjects were assigned to major areas on the basis of probable major in college. Subjects for whom English was a second language were excluded from the study. The group's age mix allowed exploration of argumentative writing performance in both traditional and non-traditional college students. Median age was 20, with a range of 16-40; a few subjects were over 40.

Topics

Two impromptu, time-limited argumentative-writing tasks were administered to all 131 subjects. Because of their class and work schedules, college students could write only on two consecutive Saturdays; high school subjects wrote on two days within the same week. To encourage revision, subjects were offered up to six hours to complete each assignment. Most finished in under three. A few wrote for four or five hours.

In the first essay, writers were instructed to take a position on the proposed tough drunk driving laws then before the Colorado legislature and to write their paper for a "friendly" audience, one that would on the whole agree with their position; six such audiences were suggested--for example, two of these were the Colorado Springs chapter of Mothers Against Drunk Driving and the Colorado Highway Patrol. To ensure that subjects were aware of their readers, at least initially, they were asked to note on their assignment sheet which audience they planned to address. The second topic was exactly the same, except that subjects were instructed to write to an audience that would on the whole be hostile to their own viewpoints. Again, several such audiences were suggested--for example, members of the Colorado Springs Bartenders Association or of the local Playboy Club.

The researchers in this study were influenced by Winter, McClelland, and Stewart (1981), who contend that the ability to think flexibly under pressure--including time pressure--is an index of higher-order thought. Their research design in part assessed subjects' cognitive flexibility by requiring them to support with very little notice an opposite point of view to what they had initially argued. In the same way, researchers in the present project anticipated that the hostile audience would provide a radically different perspective demanding flexible thinking. To guarantee the confidentiality of the hostile-audience topic--and thus create "short notice" for all subjects--the researchers administered the friendly-audience essay in the first session and the hostile-audience paper in the second rather than randomizing the topics. Thus subjects did not know in advance of session two what the topic would be.

The argumentative writing task was designed to lend itself to critical analysis and at the same time be as familiar and relevant to high school as to college students. A group audience rather than an individual reader was specified in order to replicate the "discourse community" or general readership of most academic or professional writing (Walzer, 1985; Rafoth, in press). The local nature of the audiences made them more specific than the "generalized reader" of much public discourse but writers were given little concrete information about their readers and so had to reason inferentially about them.

Holistic Essay Ratings

Identifying information was removed from the papers. Three trained raters independently evaluated all 262 essays, using a criterion-referenced scale and rating the friendly-audience and hostile-audience papers at separate sessions. The evaluation instrument was a version of the holistic rubric used in the University of Colorado at Colorado Springs English 131 exit examination essay, an analytic writing task upon which all students must perform satisfactorily in order to exit from the entry-level course in freshman composition. In the present study, that instrument was modified to reflect criteria for argumentative writing. It included four rating categories: (1) quantity and quality of the paper's ideas and development, including depth of development and elaboration of ideas; (2) clarity and logic of structure, organization, and focus, both in the whole essay and within paper sections and sub-sections; (3) clarity and appropriateness of paper's argument for readers, and (4) correctness and felicity of syntax and usage. Each category was rated from 1 to 4, and raters'

scores were summed to achieve an overall score for each paper; these ranged from 13 to 44. A standardized Cronbach's alpha showed the reliability of the sum of the three ratings to be .83. At this point, papers from 52 subjects were selected for closer analysis, and Perry Scheme ratings and audience coding were limited to these texts.

Perry Scheme Assessments

Unmarked copies of the 104 argumentative essays chosen for textual analysis were submitted to the Syracuse Rating Group, a team of evaluators trained at Syracuse University. In addition to administering standard Perry Scheme topics, Syracuse raters have made Perry Scheme assessments for numerous studies using essays and interviews produced for purposes other than Perry Scheme ratings. The Syracuse group finds that any essay (or interview) providing a stimulus to generate certain kinds of data can be evaluated from a Perry Scheme perspective providing the production is of sufficient length and complexity (Zachary, 1987).

The Syracuse Rating Group uses two independent raters with a third called in to resolve disagreements, a standard procedure in Perry Scheme assessment. Differing ratings are not averaged; rather, raters discuss the essay in question until they achieve consensus, a procedure ensuring that hard-to-rate essays are probed exhaustively. Raters look for a whole gestalt in a paper, not for quantifiable features within the essay. Many Perry Scheme cues are specific to particular essay topics and contexts; they represent applications of general epistemological and ontological categories to these specific topics. The Perry Scheme describes thinking structures and processes that operate similarly in many conceptual areas even though content

varies. In the Syracuse ratings, cues are modified for differing subject matters, emerging from the data rather than being imposed upon it. Raters evaluate only what is present in an essay, not the absence of cues although in certain key areas, absence itself can be a telling indicator of Perry Scheme level.

The Syracuse Rating Group draws upon cues (about 40 for each Perry Scheme position) dealing with overall protocol style, with ways of knowing, ways of acting (including reasoning style and conceptualization of the self), and ways of perceiving and relating to the environment, including the social environment of peers, authorities, the general society, and so on. Syracuse raters emphasize that they evaluate not a person but a performance in a particular context. To pinpoint transitions between Perry Scheme levels, evaluators assign each essay a three-digit rating: a 2-2-3 rating would indicate a paper primarily at Position Two of the Perry Scheme but showing some characteristics of Position Three thought. A 2-3-3 rating would show a performance further along in transition towards Position Three but still retaining vestiges of Position Two. A 3-3-3 rating would indicate a performance solidly at Position Three, and so on. In 1980, Pearson's r's for several of the Syracuse Rating Group's inter-rater reliabilities ranged from .71-.93. These figures are for unresolved ratings--that is, for inter-rater agreements before a third reader is called in to resolve split decisions. Syracuse raters have exchanged materials with other groups of Perry Scheme raters around the country to assure inter-group reliability.

After an initial reading of the essays in the present study, raters characterized the hostile-audience essays as an especially "rich" source of data and felt that those papers alone provided suffi-

cient material for the ratings (Zachary, 1987). Writing researchers did not study the Syracuse ratings and descriptive report until they had completed all writing ratings and coding and had run preliminary statistics.

Scores on the Syracuse ratings in this study ranged from 2-2-2 to 7-7-7, with the majority of essays focused in the 3-3-3 to 3-4-4 area. Pearson's r for unresolved ratings was .72. Each subject's three-digit rating was summed to achieve a total Perry Scheme score; these ranged from 6 to 21. The mean summed Perry Scheme score was 9.5, or an average of Position Three, "Multiplicity Subordinate," beginning transition to Position Four, "Multiplicity Legitimate, Relativism Subordinate." (Although the Perry Scheme includes nine positions, in practice most college students place in Positions Two through Five [Mentowski, Moeser, and Strait, 1983]).

Although the researchers felt some concern in using the writing-assessment essays themselves to determine Perry Scheme levels, the constraints of the study made doing otherwise impossible. First of all, essays are the preferred means of Perry Scheme evaluation: interviews are extremely expensive, and Perry Scheme experts generally agree that objective tests do not adequately capture the complexity and richness of students' intellectual development (Perry, 1985). Further, as Rest (1979) has suggested, students can recognize and understand complex concepts before they can produce them. Thus a "production" instrument such as an essay is a more rigorous and conservative measure of intellectual development than is a recognition or comprehension one such as an objective test.

Standard Perry Scheme writing assignments, which ask for personal

experience and opinion, did not fit the present study's rhetorical paradigm, which required two argumentative essays on a general social topic. To avoid poor performance because of subject fatigue, the two writings had to be scheduled at separate sessions. Yet data for rating intellectual development must be collected within a short time span, for beyond intervals of one-two weeks, one cannot know "whether differences found are due to measurement imprecision or developmental change" (Moore 1982, p. 3). Scheduling a third Saturday session in order to collect socio-cognitive data would have violated these parameters.

However, a Perry Scheme assessment includes an array of intellectual and social components: studies have found statistically significant correlations between Perry Scheme performance and performance on other cognitive and developmental tests--for example, the Loevinger Sentence Completion Test, the Defining Issues Test (a Kohlbergian measure), the Test of Cognitive Development (a Piagetian measure), the Watson-Glaser Critical Thinking Appraisal, and others (Mentowski, et.al., 1983). The correlations suggest that the Perry Scheme measurement taps into socio-cognitive developmental factors in addition to those measured by these standardized tests. Not all of these additional factors have been identified. Because of this variety, the Perry Scheme is without question "fuzzy" from a psychometric perspective. Yet its weakness is also its strength, particularly in a complex area such as writing, where numbers of different socio-cognitive and other skills are involved and where, as Pichè and Roen have noted (1987), single-factor socio-cognitive assessments may not adequately explain the behavior observed. The fact that pragmatic factors in this study dictated using the same essays for both the Perry Scheme

assessments is a methodological weakness although there is precedent for such methodology in other Perry Scheme-related writing studies (for example, Shapiro, 1986).

The following paper excerpts illustrate how one cluster of Syracuse rating cues, "ways of knowing," was applied to papers in the present study. To suggest a whole paper's gestalt, sizable sections have been drawn from a few papers rather than a sentence here and there from many. A Position Two (Dualism) performance suggests that "Knowledge [Truth] is knowable . . . , concrete, finite, absolute, factual, complete," shows "no tolerance for gray areas," and perceives knowledge as dualistic while rejecting multiplicity as "the wrong way." Experience is dichotomized into good/bad, right/wrong, we/they, and so on (Hannum, Jensen, Nichols and Zachary, 1982). Of the data in the study reported here, the Syracuse raters noted that Dualistic essays "spoke to one factor of the [drunk driving] problem and/or proposed a single-factor solution . . . . The knowledge [utilized] was usually based on complete, concrete, global examples" and "dogmatic and absolute statements were common" (Jensen and Hannum, 1983). The Position Two ("Dualism") essays excerpted below were given a Perry Scheme rating of 2-2-3 (only one paper in the study was rated 2-2-2). All cited writers support the proposed laws and direct their essays to bartenders, tavern owners, or members of the beverage industry:

> Two-1. First of all, innocent lives are sacrificed because of this incessant indulgence [drunk driving]. There is no excuse for getting drunk and then driving at any time. Second of all, it is hard for companies to keep selling alcohol if most of their customers are getting killed on the highways by carelessness.

> This carelessness must somehow be curbed. Labels on the bottle won't help because people ignore them anyway. A simple slap on the wrist won't help because like masochists they will only be back for more. The best way to curb this carelessness is through education and through tough enforcement [17-year old high school senior].
>
> Two-2. Since drunk drivers are leaving the bars and taverns to go home, the owners and employees of these establishments should make sure their customers are in a condition to make it home safely. The tough drunk driving laws are not intended to stop people from drinking. If you would help to keep the intoxicated driver off the street, these laws would not be necessary. The cause for drunk driving occurs at your establishment and these laws do not prevent you from selling beverages to anyone [28-year old college freshman].

Excerpt Two-1 reflects absolutist assumptions: statements such as, "People ignore [labels] anyway," and, "Like masochists, they will be back for more [punishment]," surely are not true of all people all of the time. Yet the phrasing here allows no exceptions. The assertion that companies can't sell alcohol "if most of their customers are getting killed on the highway by carelessness" appears to wrench reason in order to dismiss a perceived diversity: that although excessive drinking can result in drunk driving, members of the beverage industry have the right to sell alcohol. Excerpt Two-1 resolves this diversity by implying that most customers kill themselves on the highways anyway--so, presumably, bar and tavern owners have nothing to

lose from the stiffer laws. Excerpt Two-1 shows the writer's awareness of multiplicity (some people advocate labels on bottles, some would say there are already laws against drunk driving) but dismisses these factors (people ignore labels, the laws amount to a "slap on the wrist," the "best" way to deal with drunk drivers is through "tough" enforcement and education). No details define or support these contentions, nor does the writer explain how "education" and "tough enforcement" will solve the problem. Such lack of justification suggests a view of knowledge-truth-reality as concrete and complete, and hence needing only to be stated. Also note the good/bad, we/they approach: drunk drivers are "incessant indulgers," are "careless," have no excuse." Yet the quality of the writing is not remedial, and by many stylistic standards is more polished than that in excerpt Three-2, written by a 29-year old college senior.

Excerpt Two-2 makes several unsupported global propositions. For example, to claim that keeping intoxicated bar drinkers from driving would solve the drunk-driving problem is to ignore all those drunk drivers who drink in places other than bars. The performance also simply assumes that tavern owners and workers can monitor their patrons' drinking and diagnose the degree of their intoxication. The paper does not discuss how this process can be accomplished nor explain or qualify its claim that the laws are not intended to stop anyone from drinking (clearly not so, since they are expressly designed to prevent drivers' drinking to the point of legal impairment). Nor does Two-2 explore the contradiction between the bartenders' "selling beverages to anyone" and keeping drunk drivers off the streets. Rather, it resolves the contradiction by ignoring it. Many Position Two writers likewise address just one aspect of a problem--

"strict enforcement of tough laws" or the desire of victims' families to "punish" the drunk driver. It is not clear whether these writers simply fail to define the problem with more complexity or whether they see no reason to articulate more than one aspect of it. Either alternative would suggest dualistic levels of performance in which truth is finite, concrete, and complete.

By contrast, with reference to "ways of knowing," a Position Three ("Multiplicity Subordinate") performance suggests that although "total truth (definite answers) is not known YET," this uncertainty is temporary. Position Three essays imply that "perfection is possible" in the future. "Alternative points of view are acknowledged," and "differences are intriguing [and] interesting." Knowledge [truth, reality] has "multiple components or factors," with concommitant assumptions that "the more multiple components, the better . . . . [that] knowledge is quantifiable," and that "what is more important than why" (Hannum, et.al., 1982, p. 7). Position Three essays in the study use detailed, descriptive examples and list alternate viewpoints--often matter-of-factly and without genuine evaluation or integration:

> Three-1. [Your] first thoughts most likely go to business. Won't these harsher laws cut down on business? Not necessarily. The threat of a more severe punishment when driving under the influence is not going to keep people out of the bars although the harsher law may cause people to think before they drive home after having a few too many. Maybe a few more friends would be driving their buddies home or the sober one of the group is handed the keys. Why even bother with the hassles of passing a

new law when only a few might pay attention anyway? The few who pay attention could be the few who was destined to hit the man on the corner down the street. . . . What if your friend or your child was the next victim of one of the many drunk drivers? Maybe it wouldn't of happened if that driver knew he would be charged with manslaughter and couldn't just slide by this time. . . . [the paper covers two other major points, and includes a long narrative hypothetical example plus details about the law taken from the assignment sheet; 17-year old high school senior].

Three-2. [The excerpt follows two sections, one on drunk driving statistics, the other asserting that bars and hosts should be responsible "to see that no one is injured or killed by our friends and customers."] Tougher drunk driving laws will keep first-time offenders from over-indulging in the future. If they do over-indulge, they will be more likely to bring someone to get them home safely. This would help the alcoholic industry by having more customers at local bars. The friend responsible would more than likely have a drink or two himself . . . . If everyone brought a friend to supervise his actions at the pub and escort the drunk home, the streets would be safer for all of us and them. The industry would prosper from more customers . . . . [29-year old college senior].

Both Position Three excerpts reflect a "multiple components" approach to the issue: Three-1 cites the law's probable impact on business, on drinkers, on highway deaths; it discusses likely observance of the law; and, in a section not quoted, gives a hypothetical

example to suggest how it might work. Three-2 takes a "we can solve this problem" approach, suggesting that patrons' friends who are designated drivers for the evening will add to bar business by having a few drinks themselves [!]. Other "solutions" proposed by Position Three essays include bar owners' installing breath-a-lyzers and subscribing to a van service or calling cabs for tipsy customers; uniformed officers' in bars observing who's had too much to drink and offering assistance; the industry's labeling beer cans with warnings; and so on. In general, such papers imply that perfection is, indeed, possible--drunk-driving can be stopped, and the alcohol business will not be affected.

Position Three essays give lots of facts. Usually these are not explored in depth, but the diversity of information and views suggests a Position Three "more is better" emphasis upon quantity of knowledge. This laundry-list approach differs from the single-component emphases of most Position Two papers. Position Three texts take a less pejorative tone towards the audience's business interests than do Position Two essays, some of which mention these interests but seem not really to credit them with legitimacy. The Position Three papers genuinely acknowledge alternative points of view as represented by the adversarial readers' concerns.

Position Four, "Multiplicity Legitimate," is the quintessential "everyone is entitled to their [sic] own opinion" position. Where a Position Three performance "acknowledges" alternative points of view, Position Four accepts multiplicity as "legitimate in areas where the truth is not yet known," in fact affirming and embracing it. Other Position Four "ways of knowing" cues include "opinions are equal when the facts are not known," and "knowledge is ideas in process." A

Position Four performance engages in some qualitative reasoning--"'better' is perceived in some areas"--and recognizes the reasons why something is so as being more important than that it is so. Also, in a Position Four performance, "truth is becoming personal"--is "my truth" (Hannum, et.al., 1982, p.10).

Four-1. I realize that you are not responsible for the behavior of other people. You do, however, produce a food that affects people's behavior. Consequently, you are indirectly responsible for their behavior.

No law should or could deprive you from the right to operate on a market at which there is a demand for alcoholic beverages. You could, however, through commericals, advertisements, and the labels on your bottles, point out to people the possible consequences of alcohol consumption. In this way you could create an awareness among alcohol consumers of the effects of alcohol and still sell your product. Laws against the total consumption of alcohol would not be the answer to the problem, nor would the absence of any law . . . . We need laws to punish those who acted irresponsibly and deprived others, the victims, from good health or their life. Tougher laws constitute one aspect to prevent people from driving while under the influence of alcohol. Public awareness constitutes another aspect and might keep people from driving while drunk. Your assistance would be highly appreciated by your customers who are against drunk driving and the American people as a whole [20-year old college sophomore].

Four-2. As a prominent association, I'm sure you are very in-

> terested in public relations. If you were to support the proposed drunk driving laws, there is a very probable chance that your image as an association would improve in many aspects . . . . [People] would feel that you had a genuine concern for Colorado residents and wouldn't see your product as such a massive cause of injury and death. This action would put the blame for alcohol abuse right where it belongs, on the head of the individual, not the company, the suppliers, or the neighborhood liquor store. Your association is obviously an economical asset to our state and your views can be influential [20-year old college junior].

Many Position Four papers reveal the "personalizing" of knowledge: "I realize," "I feel," I'm sure," "I propose," introduce the writer into the dialogue in ways not evident in Position Two and Three performances. A Position Four performance "owns" its point of view. The cited excerpts also show writers' concerns with "why" rather than "what;" the papers give reasons for and trace the consequences of what they assert. Excerpt Four-1 explains why alcohol producers' warnings could alter drinkers' behavior and yet not interfere with liquor sales. Four-2 offers a rationale for alcohol producers' supporting the proposed laws; other Position Four papers explain why the proposed law is necessary or unnecessary, why its provisions will or won't work, and so on.

Rather than the quantity of ideas that Position Three papers list, Position Four essays focus upon fewer ideas but argue causally for them. Yet despite this narrower lens, Position Four performances see more facets of opposing points of view than do Position Three

essays: both essays excerpted above recognize that bar and tavern owners and liquor producers are not just concerned with "business" but also worry about public relations and maintaining a broad base of public support. Four-1 is aware of the producers' legal right to sell alcohol and the public demand for these products; Four-2 sees the beverage industry as an economic asset.

Yet such papers still imply that alternative perspectives are straw men to be handily toppled by the writer's asserted solution for the reader's likely problems with the new laws. By contrast, the few Position Five essays in this study make no such claims, recognizing that the laws will hurt the beverage business but nevertheless contending that they are the lesser of probable evils: some reduction in profits versus likely governmental regulation or other legal consequences if the drunk driving situation continues unchecked. Such papers appear genuinely to ponder alternatives and, as a result, to recognize that ideas are contingent and contextual.

To protect the integrity of its assessment process, the Syracuse Rating Group does not make its rating rubric public although the manual is available to anyone using a Syracuse evaluation. Readers who wish to know more about how Perry Scheme evaluations are developed and tested should read Perry, 1968, and Mentowski, et.al.

Audience Coding

An analytic coding system based upon textual indicators that subjects had considered their audience was used to label each audience consideration appearing in the essays. The skeleton of the coding resulted from past theory and research (Berkenkotter, 1981; Britton, Martin, McLeod, and Rosen, 1975; Flavell, Botkin, Fry, Wright, and

Jarvis, 1968; Hays, 1981; Moffett, 1965); audience adaptation indices appearing consistently in this particular sample were added to the schema. Each audience characteristic was labeled as it appeared. Therefore, one t-unit might have two, three, or even four different codes, others none at all. A t-unit was defined as an independent clause and any subordinate clause or nonclausal structures that were attached to or embedded in it. Any sentence fragments were attached to the independent clause. Incoherent statements were not counted nor were one-word statements such as exclamations, unless they implied a complete thought; statements such as, "Really," which in context meant something like, "I agree" would, therefore, have been counted as a t-unit.

One series of t-units was coded as follows:

Unfortunately, few people take drunk driving very seriously.
N3
And I think that the Colorado Highway Patrol is very well
S3
aware of that fact. There are though, several things that
N3 S8
CHP can do to help eleviate [sic] this deadly problem. The
S8
most direct way of course is to stop more motorists suspected of being driving while under the influence of alcohol.

The text coding was divided into five main categories:

1. N - NAMES READERS; recognizes that an audience exists by direct and indirect reference. The first and simplest category codes for any terms that name the audience, such as "you," "your," "Bar and Tavern Owners," "Colorado Highway Patrol," "MADD." This category reflects an obvious although often unsophisticated awareness of the reader. The researchers did not distinguish between the "you's"

directed to the specified reader and those intended as the generic "one"; often it was not clear which sense was intended. The N sub-categories include the following (some examples from texts have been inserted to illustrate each coding category):

N1 - Direct reference, "you"--speaks or writes directly to the audience: You would not want the drunk driver in your bar."

N2 - Indirect reference,"they, their," referring to the reader: "They [i.e., the Colorado Highway Patrol] know what a problem drunk drivers can be."

N3 - Names audience--appears in text when writer names the group to whom the paper is written: "The Colorado Highway Patrol deals everyday with drunk drivers on the highway."

2. S - STRATEGY; implements tactics that recognize readers' attributes or seek to convince readers. The strategy category goes beyond naming the audience to defining it and implementing tactics to convince it. The category has eight sub-categories, each labeling specific kinds of strategy activities:

S1 - Appeals to self interest vis-a-vis laws--how laws will help reader; how reader might benefit financially, socially; how business will benefit, reputation improve: "These laws will make your job easier" (the writer is arguing to the Colorado Highway Patrol that the laws will keep drunk drivers off the highways); "You will not have to put up with drunks in your bar" (to bartenders); "Drunk drivers are not good for your business" (to tavern owners).

S2 - States readers' responsibility, obligation; what readers ought to do. Key words: "ought," "should," "your duty,"

"your responsibility": "Bar and tavern owners ought to be sensitive to these problems [of drunk driving]"; "You should be a responsible citizen"; "Bar and Tavern owners should inform their bartenders, waitresses, and managers to observe when [an] individual is too intoxicated to drive"; "It's the parents' responsibility to educate their teenage drivers."

S3 - States readers' circumstances, beliefs, experiences, characteristics--their state of being; key phrases: "you have seen...," "you might think...," "you put your family first...," "you are...": "You [Colorado Highway patrol] come in contact with [drunk driving]"; "Every member of the Bar and Tavern Owners' Association witnesses irresponsible use of alcohol"; "Parents care about the well-being of their children."

S4 - Direct emotional appeal: "What if you lost a child, spouse, or friend because of drunk driving?"; "You might be affected personally [by a drunk driving accident]."

S5 - Tells readers they have choices: "This controversy presents us with a choice: we can lobby against tougher laws, or we can support them"; "If you had to choose quality or quantity [of customers], what would it be? The choice is yours."

S6 - Praises, supports, shows appreciation, flatters--calls readers "responsible people": "We [bar and tavern owners] are the good guys"; "We as upright citizens. . . "; "Your [public service advertisements] emphasize the responsible actions of individuals such as the Bar and Tavern Owners Association."

S7 - Use of shared features, aligns with audience--"we": "Just recently in our city. . . "; "We all want a better place to

live" (italics added).

S8 - Asks reader to take some kind of action or to support laws or to take action to solve the problem: "I urge you to support these laws"; "You can ask your customers to drink less"; "You can write your congressman"; "There are steps you can take to help your business assist with this law."

3. C - CONTEXT; establishes context and gives background information for the reader. This category codes for instances in which the writer establishes persona, states the issues, gives his or her position on those issues, explains the laws. These instances generally occur in the paper's opening section:

C1 - Initially states own position--limited to first part of paper: "I'm here to argue against the proposed changes in these laws"; "The state should pass and enforce tougher drunk driving laws."

C2 - Introduces self, establishes persona: "I'm speaking to you as a concerned citizen"; "I know how law enforcement officers feel because my father was a policeman."

C3 - Gives reasons for own position (not general reasons; some variety of "I" statement): "I feel very strongly about drunk driving because my best friend was killed by a drunk driver"; "One of my best friends was permanently disabled in an accident involving a drunk driver."

C4 - States issue or problem--what it is, why it's a problem; coded in the opening section only: "The number of accidents caused by drunk drivers has risen sharply"; "The provisions of the present law are not enforced. Drunk drivers are let off with

a slap on the wrist."

C5 - Gives specific information or clearly explains the proposed laws (does not give an opinion but clarifies what the terms of the laws are): "Under the proposed law, anyone found guilty of drunk driving must enroll in an alcohol education program"; "One such bill provides for a mandatory twenty-four hour jail sentence, license suspension for thirty days, and a stiff fine."

4. R - RESPONSE; responds, accommodates to reader's concerns, values, beliefs; engages in an audience-related dialectical process: Although often not including a full-fledged thesis, antithesis, and synthesis, response moves go beyond the definitional and strategic activity in the strategy category to engage the reader in argumentation. That is, the paper recognizes what the reader's objections to an argument might be and tries to address those concerns in a convincing manner: rebutting them, conceding their validity, and so on. Such tactics are obviously audience-related; dialectical activity not specifically tied to readers' concerns is not counted.

R1 - Articulates readers' possible worries or fears about or possible objections to the writer's position: "Bar owners may feel that the laws will hurt business"; "You will probably believe that these laws are too costly."

R2 - Gives reasons for these fears, worries, etc.--often signalled by a "because" clause: "Some [tavern owners] fear these laws because they are afraid they will hurt business"; "Many [drivers] object to the new laws because they are afraid they will be caught driving drunk" (italics added).

need not be concerned: "The laws won't keep anyone from drinking but only from driving drunk."

Coding in the response category might look like this:

> You might feel that the laws will hurt business because customers will be reticent to patronize taverns. However, the law doesn't propose to restrict the consumption or sale of alcoholic beverages.
>
> (R1 = "You might feel that the laws will hurt business because"; R2 = "customers will be reticent to patronize taverns. However,"; R3 = "the law doesn't propose to restrict the consumption or sale of")

4. NE - NEGATIVE APPEALS; includes references to the audience in which the writer blames or insults readers and arguments that are inappropriate or ineffective for the specified audience; also includes instances in which the writer fails to consider readers' needs for clarification of terms or uses vague language or ambiguous pronoun references ("writer-based" prose). The negative category evolved from the texts; that is, pejorative statements and inappropriate appeals appeared with such frequency that the researchers felt compelled to code them. The researchers did give the writer the benefit of the doubt here. That is, they reserved the NE1 coding for statements that would obviously alienate. Those that were borderline were coded in the strategy category or else not coded at all. In part, the inappropriate codings identified places in which writers had addressed one audience but invoked another (Ede and Lunsford, 1984) and thus created an audience role that their readership might not be willing or able to play (Ong, 1975).

NE1 - Negative or pejorative references to readers. The writer blames the readers; negative representations of readers:

"You [bartenders] don't care what happens to people--you just want to make money"; "Maybe you just don't care about how you drive" [to members of the Playboy Club]; "You my friend are as guilty as the murderer sitting behind bars in Canyon City" [to tavern owners].

NE2 - Inappropriate argument for audience; the argument would be ineffective with the specified reader because it does not address that reader's particular concerns: "Those laws are a step in the same direction parents have tried to go all along where raising kids is concerned" [to Bar and Tavern Owners Association]; here, "step in the same direction" refers to the idea that parents discipline and restrict their children. The entire paper directs its arguments to parents' concerns about their children, assuming that all bar and tavern owners are parents and that their concerns as parents would supersede their interests as business people. While the latter might, ultimately, be true, it needs to be argued, not simply taken as a given. "Drinking is popular among teenagers" [to Playboy Club; labeled as inappropriate because teenagers are not members of the Playboy Club, yet the entire argument was directed to teens.]

NE3 - Private or code references: "Let us now take a man who lives a terminated sufferage which he received from jail." The meaning of the phrase "terminated sufferage" is far from clear and is never explained.

NE4 - Vague pronouns: "In order for the laws to be morally correct, they must look through the eyes of a drunk driver." The "they" in this example seems to refer to legislators. Yet in the preceding text, such a referent is neither specified nor implied.

There were few examples in the W2 category, not because papers were not replete with questionable pronoun references but because the researchers marked only those instances where meaning was truly ambiguous.

NE5 - All purpose words: "If traffic deaths can be reduced without resorting to the extreme means, so much the better." In context, it is never clear what "the extreme means" refers to--specific provisions of the proposed law or the entire law, nor does the text ever establish the law's extremity.

Coding for NE3 through NE5 was very conservative in order to avoid overlap with grammatical concerns.

Although all the examples cited are local to the drunk driving topic, with appropriate adjustments the general audience-coding categories could be applied to other topics. For instance, suppose one were to argue to a group of teenagers in support of using contraceptives. An appeal to self-interest (S1) might look something like this: "By using contraceptives, you [teens] will guarantee yourselves a brighter future"; or, under S2 (reader's responsibilities): "Teens should take responsibility for their own sexuality." Or presume the writer is addressing the National Riflemen's Association and is advocating gun-control legislation. A statement of readers' circumstance, belief, experience (S3) might look like this: "Many of you [NRA members] own and cherish not just one but cabinets full of rifles and handguns." An S6 statement (supports readers) might read: "As a group of prominent and upright individuals, the NRA . . ."

One researcher coded the papers' audience moves. To test her reliability, two raters who had no previous involvement with this

research project were trained in the audience coding rubric and then given 75 textual examples to code. A standardized Cronbach's alpha established that on these 75 examples, consistency among the three raters--the two independent evaluators and the original rater--was .99. In tabulating a subject's audience scores, researchers counted the number of times each coding appeared, divided by the number of t-units in the paper.

In summary, in this study the following premises were explored:

1. in argumentative writing, writer's Perry Scheme score would be a more significant predictor of paper score than would age, grade, major, or gender;

2. in argumentative writing, audience adaptation activity would both be a significant contributor to overall paper scores and be significantly related to writers' Perry Scheme scores;

3. in argumentative writing, addressing a hostile audience would elicit more dialectical activity than writing to a friendly one.

Findings

Data Analyses

A series of statistical models was constructed to test the research hypotheses; stepwise multiple regression employing forced-entry and backward-elimination criteria was used to test these models. Beta weights were utilized to describe the individual influences of the independent variables to the dependent variable. Beta weights are standardized regression coefficients that have been adjusted by removing the individual influences of the other variables in the equation; by adjusting and standardizing the coefficients, one can get an indication of the relative contribution that each variable makes

towards explaining the variance in the dependent variable while in the presence of the other variables (see Loether and McTavish [1976], pp. 309-344; Norusis [1985], pp. 11-65).

Other measures for examining usefulness of the independent variables to the prediction of the dependent variable are the change in R-squared and the adjusted R-squared. These measures help describe the relative merit of choosing certain independent variables over others in a statistical model and indicate that model's fit. In general, the most reliable model is the one with the fewest numbers of variables in the equation explaining the most variance in the dependent variable. Since the R squared will always increase as the number of independent variables increases, it tends to overestimate the proportion of explained variance. The adjusted R-squared attempts to keep this bias to a minimum by adjusting for the sample size and the number of variables in the equation. In the present discussion, the adjusted R squared (adj. R^2) will be the figure used to represent that variation around the dependent variable explained by all the independent variables in the equation. A general rule of thumb for the maximum number of variables in an equation is m/10, where m is the minimum number of observations available to all variables in the equation (SAS, 1983). In the present sample, there are 52 responses (i.e., $m = 52$) recorded for every variable; hence the optimum number of variables in a model at any given time should be 52/10, or no more than 5 or 6.

The following criteria were used for the forced entry and backwards selection techniques. For forced entry, the minimum tolerance level was set at .20; that is, proportion of variance around an independent variable that was not explained by the other variables in the

equation had to be .20 or greater. For backwards selection, an independent variable had to have an alpha level of $p = .05$ in order to remain in the equation while in the presence of the other variables. The tolerance level was also assessed for evidence of multicollinearity (highly interrelated variables). If some independent variables share strong linear relationships, to interpret the variables' individual contributions within the model becomes difficult.

In the discussion that follows, first Perry Scheme score will be examined as a predictor of the paper scores while in the presence of any significant demographic variables. In addition, the relationships of the demographic variables and individual audience moves to Perry Scheme score and to both the friendly- and hostile-audience paper scores (score fr, score hos; see Figure 1) will be explored. Although the present project was not, strictly speaking, a repeated-measures design, all audience variables were treated as pairs in order to minimize possible practice effects between score fr and score hos. For example, the strategy-fr and strategy-hos moves were always paired in the regression equations in which they appeared regardless of whether the dependent variable was score fr or score hos. The same was true of the response and negative variables. However, even though scores on the hostile-audience paper were lower than on the friendly-audience essay (score fr: $M = 26.67$, $SEM = 1.06$; score hos: $M = 25.54$, $SEM = .97$), practice effects cannot be entirely ruled out.

Insert Figure 1 about here

Finally, from the sample of 52 cases, the model that best predicts paper score will be developed through the selection of those variables in the demographic and audience analyses that contribute

most towards explaining the greatest amount of variance in paper score.

Demographic Analysis

Of the demographic variables examined, grade was by the far the single most important predictor of paper score and Perry Scheme score, even in the presence of other demographic variables, which included interaction terms (such as, for example, age X grade X sex) and indicator variables (the nominally-scaled variables sex and major). Main effects such as grade, age, sex, and major (coded into three dummy variables) were analyzed first for their relationship to Perry Scheme score and to paper scores. Based on the entry criteria established, age, grade, sex, and the business and engineering majors were included in the equation. Multiple $\underline{R}$'s were: Perry Scheme = .53, adj. $\underline{R}^2$ = .20; score fr: $\underline{R}$ = .49, adj. $\underline{R}^2$ = .16; score hos: $\underline{R}$ = .53, adj. $\underline{R}^2$ = .20. Of the independent variables, only grade contained a significant beta (score fr: = .33, score hos: = .37, Perry Scheme: = .39). For all three equations, grade was the only variable retained after the backward selection. Some interaction terms met the entry criteria but never made a significant contribution towards explaining the variance in the model; therefore, they were eliminated from further analysis along with all other demographic variables except grade.

Once it had been established that grade was the only significant demographic predictor, Perry Scheme score was brought into the equations to assess the relative contribution of both Perry Scheme and grade to paper scores. In the score fr equation, the addition of Perry Scheme score to grade produced a multiple $\underline{R}$ of .56. The adjusted $\underline{R}^2$ went from .16 (with grade alone predicting score fr) to an

adjusted $\underline{R}^2$ of .29 (with both grade and Perry Scheme in the equation), increasing the variance explained by 81%. The inclusion of Perry Scheme in the score fr equation with grade as an independent variable also affected the betas (grade: = .22, Perry Scheme: = .42). The beta for grade was not significant once Perry Scheme was considered.

In predicting score hos, the addition of Perry Scheme to the equation with grade also contributed significantly. Multiple $\underline{R}$ was .66, and the adjusted $\underline{R}^2$ doubled from .20 to .41. The beta for grade (.22) also dropped below significance while the beta for Perry Scheme remained strong (.53; see Table 1).

Insert Table 1 about here

Audience Analysis

Next, the impact of three pairs of audience-strategy moves on Perry Scheme score, score fr, and score hos was examined. These audience moves do not include the naming and context categories, which had no significant impact upon paper scores and so were dropped from further analysis. Thus the six audience variables examined were strategy-fr, strategy-hos; response-fr, response-hos; negative-fr, negative-hos.

First, in an equation with Perry Scheme score as dependent variable, strategy-hos (= .29) and response-hos (= .29) were the only significantly contributing measures. With all six audience moves in the model, the multiple $\underline{R}$ was .57 and the adjusted $\underline{R}^2$ was .23. After backwards selection, with just strategy-hos and response-hos remaining, the Multiple $\underline{R}$ was .50 with an adjusted $\underline{R}^2$ of .22. Thus removal of four of the audience variables decreased the variance explained by

only 4%. Both as a pair and individually, negative moves contributed only insignificantly to Perry Scheme score (see Table 2).

Next, with score fr as the dependent variable, the multiple R for the six variables was .59 and the adjusted R^2 was .26. After backwards selection, the multiple R for the remaining three significant variables (strategy-fr, strategy-hos, response-hos) was .55 with an adjusted R^2 of .26; thus the variance explained remained the same despite removal of the negative moves and response-fr. The significant betas were strategy-fr (.28), strategy-hos (.26), and response-hos (.31; see Table 2).

Finally, in the analysis of score hos as the dependent variable, the overall multiple R with all six variables in the equation was .75 and the adjusted R^2 was .50. However, the only significantly contributing beta was response-hos (.53). After backwards selection, with two variables left in the equation, the Multiple R was .71 and the adjusted R^2 was .49. Again, negative moves contributed only insignificantly to score hos. Significant betas for the two remaining variables were strategy-hos (.28) and response-hos (.65; see Table 2).

Insert Table 2 about here

Final Model Analysis

From the preceding analyses, six variables were chosen for their consistency in significantly contributing to both score fr and score hos: Perry Scheme score, grade, strategy-fr, strategy-hos, response-fr, response-hos. With score fr as the criterion variable, the overall multiple R was .64 and the adjusted R^2 was .33. However, the only significant beta was Perry Scheme (.30). After backward selec-

tion, the reduced model produced a final multiple R of .60, and an adjusted R^2 of .33, with two variables remaining in the model: Perry Scheme (= .48) and strategy-fr (= .29; see Table 3).

In the score hos equation, response-hos, Perry Scheme, and grade were the only significantly contributing variables even when the other audience moves were present (R = .82, adj.R^2 = .62). After backwards selection, the final reduced model predicting score hos had a multiple R of .81 and an adjusted R^2 of .63; eliminating three variables strengthened the variance explained by 2%. Remaining in the final score hos equation were grade (= .27), Perry Scheme (= .31), and response-hos (= .51; see Table 3).

Insert Table 3 about here

Discussion

As expected, Perry Scheme score was a stronger predictor of paper scores than were demographic variables such as grade level, age, major, gender, and so on. Results also accorded with other studies establishing the contribution of educational level to Perry Scheme performance. Also as anticipated, the stronger that essays were in shaping their messages for their readers, the higher their scores on both writing tasks. Such findings, although not surprising, do substantiate prior theory and research suggesting that successful persuasive/argumentative writing focuses to a considerable degree upon its readers and that to perform well on argumentative writing tasks, writers need skills for both adapting to readers' needs for information and enlisting the audience's support for the writer's point of view. More importantly, this study points to what some of those

skills might be and to their relationship to level of Perry Scheme performance and educational level (grade).

Certainly strategy tactics were important for both papers: with score fr and score hos as dependent variables, some form of strategy activity remained in each equation after backwards selection (see Table 2). To engage in such activity, writers needed not just to be aware of their audience but to approach it in a cooperative way. To do this, they had to present themselves as having some common interests with their readers as well as understanding and indeed valuing them. They also needed to consider the proposed laws from their audience's point of view--to see "what was in it" for this particular constituency.

When Perry Scheme score and grade level were included in the regression equations, of all the audience variables analyzed, strategy-fr predicted most strongly for score fr, its contribution to the variation explained exceeded only by that of the non-audience variable Perry Scheme score. Further, the relative constancy of the significant strategy-fr beta weight with and without both Perry Scheme score and grade in the equation suggests its independent contribution to score fr. That is, even in the presence of Perry Scheme score and grade, strategy-fr maintained a significant and unique relationship to score fr (compare Tables 2 and 3). Such strategy activity was obviously effective on the friendly-audience paper, where writers had chosen a readership sympathetic to their own viewpoints and therefore could identify with that audience and present the readers' case as if it were their own, which in many ways it was. Further, in the score fr equation without Perry Scheme score and grade, the predictive

strength of strategy-hos suggests that the kinds of skills involved in mounting effective hostile-audience strategy were also useful in the friendly-audience paper; the reverse, however, was not the case: strategy-fr did not predict for score hos although strategy-hos did. Evidently those skills useful in producing an effective paper for a friendly audience did not prove as useful in the hostile-audience paper.

That is, engaging in effective strategy activity with the hostile audience required writers to form a rhetorical alliance with readers with whom they disagreed, an activity that one could anticipate would be difficult for students at lesser levels of intellectual performance. Strategy activity increased slightly on the hostile-audience paper (score fr: $\underline{M}$ = .26, $\underline{SEM}$ = .04; score hos: $\underline{M}$ = .30, $\underline{SEM}$ = .04). However, the kinds of strategies writers employed on the two papers appeared to differ. On the friendly papers, successful writers were most apt to characterize or define their readers to those readers (strategy 3)--for example, "You Mothers against Drunk Driving know the dangers that drunk drivers pose to your children." Such a ploy is effective in argumentative writing because it conveys the writer's understanding of the reader's position. Although such tactics are especially important with an adversarial audience, writers did less defining of their readers on the hostile- than on the friendly-audience paper, perhaps because they found it more difficult sympathetically to imagine hostile readers' interests and concerns.

On the hostile-audience paper, most effective writers utilized strategy 6, "praises, supports audience," and strategy 7, "shared features." The regression equation with Perry Scheme score as dependent variable established the significant relationship of strategy-hos

to Perry Scheme score (see Table 2). Probably more intellectually mature writers could view their adversarial readers as having some attributes worthy of praise even though writers disagreed with those readers' positions on the drunk-driving laws. In the same way, mature writers also recognized the importance of aligning themselves with their audience--through appreciation of that audience and recognition of what the writer had in common with it--rather than confronting readers adversarily. Such postures involve an awareness that there are responsible people with valid concerns on all sides of most issues, a perspective achieved with higher-level intellectual and ethical development. Evidently many subjects in our group could establish a common bond with their friendly audience but only those at higher levels of intellectual development could also do so with hostile readers.

The fact that grade level remained in the last score hos regression equation (see Table 2) and that strategy-hos did not--although it was the final audience variable removed from the equation--indicates that not only Perry Scheme performance but also years in school may have shared common properties with strategy-hos; these two variables contributed more strongly to the relationship with score hos than did strategy-hos. Substantial zero-order correlations ($p < .05$) between grade and both strategy-hos and strategy-fr could suggest that much of the strategy activity measured in this study was related to educational level. However, the nature of that relationship is not clear and appears to be indirect: the researchers have no reason to believe that many subjects in the study had been specifically instructed in audience strategies. Perhaps with more years in school, learners

become more aware of social context in general, and this awareness in turn enables them more skillfully to engage in certain kinds of strategy activity.

Certainly one can infer that such audience strategies could be productively taught to students in the grade levels represented in this study and would enhance their performance in argumentative/ persuasive writing, at least that directed to a friendly audience. However, subjects might face some cognitive barriers when employing strategy moves with a hostile audience. The fact that strategy-hos was dropped from the final score hos equation underlines its relationship to Perrry Scheme score and educational level: apparently the activity measured by the strategy-hos category was accounted for to a substantial degree by both Perry Scheme score and grade and so, in the presence of those variables, was eliminated from the backwards equation. Thus we can infer that while teaching audience-strategy activity might well improve students' argumentative-writing performance in certain areas, students would experience difficulty in others--namely, strategies depending upon accurate conceptualization of adversarial audiences or readers very different from themselves. What needs to be tested is the degree to which intervention could improve writing performance in this area and the impact, if any, that such intervention would have upon level of Perry Scheme performance. Probably instruction in audience conceptualization would have differential effects: that is, writers would improve up to the point of their cognitive thresholds but not, in the short term, beyond. Rafoth's experience (1985) with giving varying amounts of audience information to proficient and non-proficient freshmen writers can be interpreted to suggest such a conclusion.

Hostile-audience response was another audience category that, in the absence of Perry Scheme score and grade, predicted for both papers. This category measured writers' dialectical activity with their adversarial readers. Response-hos also predicted strongly for paper-hos even in the presence of Perry Scheme score and grade, contributing more to the multiple R than did Perry Scheme score (response-hos = .51, Perry Scheme = .31). As expected, frequency scores showed considerably more response activity on paper hos than on paper fr (score fr: M = .06/tu, SEM = .02; score hos: M = 26/tu, SEM = .04). On the friendly-audience paper, only a few writers inferred, articulated, and then responded to their readers' views; apparently most subjects saw no need to anticipate readers' objections to the proposed drunk-driving laws since readers were, by stipulation, friendly. Only a few writers considered that, for example, although members of the Colorado Highway Patrol generally supported tougher laws, they might also be concerned that stricter laws would add to their work loads or lead not to the imposition of heavier penalties on drunk drivers but to more plea bargaining.

On score hos, not only the amount of response activity but also its significance increased sharply. Evidently, the hostile readership challenged writers to justify their views on the drunk-driving issue rather than assume automatic agreement from their readers. Those writers who most successfully argued their own positions actively anticipated and then responded to their readers' probable questions and concerns about those views. In comparison to other papers in the study, their arguments were both complex and "reasonable." Probably writers who seriously credited their adversarial readers' viewpoints

were less apt to make sweeping judgements and settle for facile conclusions than those who easily dismissed their readers' perspectives. The researchers had anticipated that response activity would predict for Perry Scheme score, and so indeed it did: the response-hos beta weight contributed more to Perry Scheme score than either the response-fr or strategy-hos betas (see Table 2). Yet without Perry Scheme score and grade in the score hos equation, the response-hos beta weight was .65; when Perry Scheme and grade were added, it dropped roughly 22%, to .51. Obviously response-hos was such a strong predictor of score hos that its strength of predictability was much greater than that of either Perry Scheme score or grade. These findings make clear the importance of dialectical mental engagement with readers, and especially adversarial readers, for effective argumentative writing.

One or two points about the negative-hos moves are worth mentioning since these moves when entered alone did contribute significantly to the variation in both score fr and score hos even though in the presence of the other audience moves they were not significant contributors to paper scores. Just as the hostile-audience paper elicited more response activity from writers, so it also led, in the cohort as a whole, to more negative responses to readers; on the hostile-audience paper subjects more than doubled their negative moves (negative-fr: $\underline{M}$ = .045, $\underline{SEM}$ = .02; negative-hos: $\underline{M}$ = .12, $\underline{SEM}$ = .03). The inverse linear relationship of negative-hos moves to paper scores, especially score hos, suggests that indeed with the hostile-audience paper we were assessing something akin to what Winter et.al. (1981) posited as flexibility in thinking. Their study looked at flexibility with respect to arguments themselves; the present study explored

flexibility in adapting an argument for almost opposite kinds of readers, and results show that essays scoring high in holistic ratings also scored low in the negative category, and vice versa.

The most frequently used negative-hos move was NE2, "inappropriate argument for audience," a move that reflected a writer's failure to address the audience she had invoked (Ede and Lunsford, 1984). In their papers, some writers seemed to lose sight of their readers--to start out and conclude by writing to, say, bar and tavern owners but in the middle of the essay drift into arguments addressed more to an audience of teen-agers or bar patrons than to owners. Some of this drift may have resulted from writers' inexperience: high school students in particular may not have known what sorts of arguments would be effective with members of the beverage industry although impressionistic evidence from the papers suggests that many of those writers did recognize that the beverage industry faced a loss of revenues if the new laws were passed. Whatever the explanation, results from this study imply that those papers rated lowest on score hos reflected, among other things, their writers' difficulties in both conceptualizing and responding appropriately to readers very different from themselves. Thus subjects appear to have substituted a readership they could more easily relate to for that specified in the assignment.

Although strategy and response did predict for both paper scores, obviously other factors besides audience adaptations were involved in effective argumentative writing: Perry Scheme score contributed to general argumentative writing performance even in the presence of the writers' audience adaptations. Thus by a different route the present study reaches some of the same conclusions as Piche and Roen (1987)--

that the writing of cognitively mature subjects is more complex in a host of ways than that of less mature writers and not just in writers' adaptations to readers. In the present study, the independent contribution of Perry Scheme score probably reflects postures towards reality important for successful argumentative writing. Among other things, the Perry Scheme assesses an essay's stance towards competing realities, and clearly a paper's ontological assumptions will affect not only how it accommodates to readers with differing views but also how it presents and supports a position.

In this study, few papers reflected writers' critical analysis of their own arguments. Such unexamined writing produces simplistic and often cliche-ridden essays that neither support their points in depth nor thoughtfully weigh their merits--probably because the writers either see no necessity for doing so or cannot yet do so effectively. In the present project, only Position Four and Five papers genuinely argued their positions, and most Position Four papers approximated such writing behavior rather than fully realizing it.

It should also be noted that the quality of Position Four writing often declined as the papers tried to deal with more complex factors. In such cases, the result was "incoherent" essays not as clearly focused as Position Three papers and frequently filled with tangled syntax. Some Position Four papers had suffered in the "focus" and "syntax" holistic-rating categories, a fact that argues among other things for the independence of the Perry Scheme and writing assessments. More importantly, it suggests that writing instructors should be wary about penalizing students for incoherency that shows up as they attempt to grapple with complexity in new ways, for such penalties may encourage clarity at the expense of intellectual growth--and,

ultimately, writing growth.

Also emerging from this project is the implication that argumentative-writing performance is closely related to writers' levels of intellectual development, an assertion that may seem self-evident but one that has been questioned in recent years. This study provides support for such a link although the results need to be tested with other student populations in different settings. It is also clear that grade level, which contributed about 20% to the explained variation in Perry Scheme score, was an important contributor to score hos independent of its impact on Perry Scheme score. The researchers have no basis for attributing this relationship to direct instruction in argumentative writing. Probably more years in school simply give students a wider pool of information and ideas upon which to draw in mounting an argument--apart from the ways in which that information is used and meaning constructed from it, processes that presumably would show up in Perry Scheme score.

What the present findings do suggest is that in working with students' argumentative writing, instructors are also working with at least some of their critical-thinking abilities. Results also imply that before students can master logical and dialectical reasoning abilities, they need to move beyond dualistic and multiplistic ones. Attention to writers' strategies with and responses to oppositional readers might well facilitate this process, for it would force writers to explore perspectives and people different from themselves and so loosen their ontological rigidity. Such processes would also of necessity engage them in dialectical thinking, and increases in such thinking should strengthen their argumentative writing whether the

writing is, ultimately, directed to specific audiences or to the more general reader of much academic discourse.

All this is not to say that students' argumentative-writing problems can be magically solved simply by reminding them that they need to attend to logic, evidence, and audience. The authors, two of whom are writing instructors, are cautious about such sanguine predictions, suspecting that dualistic and multiplistic writers write the way they do not because no one has ever enjoined them to do otherwise but because they confront genuine cognitive thresholds that make doing otherwise difficult.

Data in the present study seem to support such speculations: by its retention of Perry Scheme score, grade, and response-hos in the score hos equation, the final model shows the importance of these three factors in predicting argumentative-writing performance. In understanding and working with such writing, instructors will want to consider all three. The extent to which carefully designed and sequenced instruction in audience accommodation might improve argumentative-writing performance in subjects at varying levels of grade and Perry Scheme performance needs further exploration and testing. But in any event, one cannot reasonably expect to go into the classroom to teach dialectical activity as a way of strengthening argumentative writing without also taking into account both students' educational levels and their socio-cognitive development, in this case as measured by Perry Scheme performance.

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References

Basseches, M. (1984). Dialectical thinking and adult development. Norwood, NJ: Ablex.

Berkenkotter, C. (1981). Understanding a writer's awareness of audience. College Composition and Communication, 32, 388-399.

Bloom, A. (1987). The closing of the American mind, How higher education has failed democracy and impoverished the soul's of today's students. New York: Simon and Schuster, 1987.

Britton, J., Burgess, T., Martin, N., McLeod, A., & Rosen, H. (1979). The development of writing abilities (11-18). London: MacMillan Education, Ltd.

Chickering, A. W. (1969). Education and identity. San Francisco: Jossey-Bass.

Ede, L., & Lunsford, A. (1984). Audience addressed/audience invoked: The role of audience in composition theory and pedagogy. College Composition and Communication, 35, 155-171.

Erikson, E. H. (1968). Identify: youth and crisis. New York: W. W. Norton.

Flavell, J. H., Botkin, P. T., Fry, C. L., Jr., Wright, J. W., and Jarvis, P. E. (1968). The development of role-taking and communication skills in children. New York: John Wiley.

Flower, L. (1979). Writer-based prose: A cognitive basis for problems in writing. College English, 41, 19-38.

Gilligan, C. (1981). Moral development. In A. W. Chickering and Assoc. (Eds.), The modern American college (pp. 139-157). San Francisco: Jossey-Bass.

Haan, N. (1975). Hypothetical and actual moral reasoning in a

situation of civil disobedience. Journal of Personality and Social Psychology, 32, 255-270.

Hannum, B., Jensen, N., Nicholas, M., and Zachary, L. J. (1982). Working cue sheets for the Syracuse Rating Group. Fayetteville, N.Y.

Harvey, O. J., Hunt, D. E., and Schroder, H. M. (1981). Conceptual systems and personality organization. New York: Wiley.

Hays, J. N. (1981). The effect of audience considerations upon the revisions of a group of basic writers and more competent junior and senior writers. University of Colorado, Colorado Springs, CO (ERIC Document Reproduction Service No. ED203 802).

Hays, J. N. (1984). Stages in the development of analytic/argumentative writing abilities during the college years. In L. C. Buhl & L. A. Wilson (Eds.), To improve the academy (Vol. 3; pp. 158-171). Pittsburgh, PA: The Professional and Organizational (POD) Network in Higher Education.

Hays, J. N. (1987). Models of intellectual development and writing: A response to Myra Kogen et.al. Journal of Basic Writing, 6 (1), 11-27.

Heath, D. (1977). Maturity and competence: A transcultural view. New York: Gardner press.

Jensen, N., and Hannum, B. (1983). Hays report. Syracuse Rating Group, Fayetteville, NY.

King, P. M. (1978). The development of reflective judgement and formal operational thinking in adolescents and young adults (Doctoral dissertation, University of Minnesota.) Dissertation Abstracts International 38, 7233A.

King, P. M. (1978). William Perry's theory of intellectual and

ethical development. In L. L. Knefelkamp, C. Widick, C. A. Parker (Eds.), New directions for student services: Applying new developmental findings (pp. 35-50). San Francisco: Jossey-Bass.

King, P. M., Kitchener, K. S., Wood, P. K. (1985). The development of intellect and character: A longitudinal-sequential study of intellectual and moral development in young adults. Moral Education Forum, 10 (1), 1-13.

Kitchener, K. S. (1983). Cognition metacognition and epistemic cognition: A three level model of cognitive processing. Human Development, 4, 222-232.

Knefelkamp, L. L. (1974). Developmental instruction: fostering intellectual and personal growth in college students. Unpublished doctoral diss., University of Minnesota.

Kohlberg, L. (1969). Stage and sequence. The cognitive-developmental approach to socialization. In D. Goslin (Ed.), Handbook of socialization theory and research (pp. 347-480). Chicago: University of Chicago Press.

Kroll, B. (1984a). Audience adaptation in children's persuasive letters. Written Communication, 1, 407-427.

Kroll, B. (1984b). Writing for readers: Three perspectives on audience. College Composition and Communication, 2, 172-185.

Kurfiss, J. (1976). Late adolescent development: A structual-epistemological perspective. Doctoral dissertation, University of Washington. Dissertation Abstracts International, 37, (2): 954B (University Microfilms No. 76-17,536).

Loether, H. J., and McTavish, D. G. (1976). Descriptive and inferential statistics. Boston: Allyn and Bacon, Inc.

Loevinger, J. (1976). Ego development. San Francisco: Jossey-Bass.

Mentkowski, M., Moeser, M., & Strait, M. J. (1983). Using the Perry Scheme of intellectual and ethical development as a college outcomes measure: A process and criteria for judging student performance (6 vols.). Milwaukee: Alverno College Productions.

Moffett, J. (1968). Teaching the universe of discourse. Boston: Houghton Mifflin.

Moore, W. J. (1982). The measure of intellectual development. Unpublished manuscript, Center for the Applications of Developmental Instruction. Farmville, VA.

Norusis, M. J. (1985). SPSSx advanced statistical guide. Chicago: SPSSx, Inc.

Ong, W. J. (1975). The writer's audience is always a fiction. PMLA, 90, 6-21.

Perry, W. G. (1968). Patterns of development in thought and values of students in a liberal arts college: A validation of a scheme. U. S. Department of Health, Education, and Welfare, Office of Education, Project 5-0825.

Perry, W. G. (1970). Forms of intellectual and ethical development in the college years: A scheme. New York: Holt, Rinehart and Winston.

Perry, W.G. (1985). Perry's perplex, or issues unresolved and unresolveable, 1985. Notes to participants in project MATCH conference, Davidson College, Davidson, North Carolina, June 1985.

Pichè, G. L., & Roen, D. (1987). Social cognition and writing: Interpersonal cognitive complexity and abstractness and the quality of students' persuasive writing. Written Communication,

4, 69-89.

Rafoth, B. A. (1985). Audience adaptation in the essays of proficient and non-proficient freshman writers. Research in the Teaching of English, 19 (3), 237-253.

Rafoth, B. A. (in press). Discourse community: Where writers, readers and texts come together. In B. A. Rafoth and D. L. Rubin (Eds.), The social construction of written communication. Norwood, N. J.: Ablex.

Rest, J. R. (1979). Development in judging moral issues. Minneapolis: University of Minnesota Press.

Rubin, D. L., & Piché, G. L. (1979). Development in syntactic and strategic aspects of audience adaptation skills in written persuasive communication. Research in the Teaching of English, 13, 293-316.

Rubin, D. L., Piché, G. L., Michlin, M. L., & Johnson, F. L. (1984). Social cognitive ability as a predictor of the quality of fourth-graders' written narratives. In R. Beach and L. S. Bridwell (Eds.), New directions in compostion research (pp. 297-307). New York: The Guilford Press.

Rubin, D. L., and Rafoth, B. A. (1986). Social cognitive abililily as predictor of the quality of expository and persuasive writing among college freshmen. Research in the Teaching of English, 20, 9-21.

SAS Institute, Inc. (1983). SUGI Supplemental Library User's Guide, 1983 Edition. Cary, NC: SAS Institute, Inc.

Shapiro, N. S. (1985). Rhetorical maturity and Perry's scheme of cognitive complexity. Paper presented at the meeting of the Con-

ference on College Composition and Communication, Minneapolis, MN. March.

Walzer, A. E. (1985). Articles from the California divorce project: A case study of the concept of audience. College Composition and Communication, 36, 150-159.

Weathersby, R. P. (1981). Ego development. In A. W. Chickering and Assoc. (Eds.), The modern American college (pp. 5175). San Francisco: JosseyBass.

Winter, D. G., McClelland, D. C. and Stewart, A. J. (1981). A new case for the liberal arts. San Francisco: Jossey-Bass.

Zachary, L. J. (1987). Personal communication, August 15, 1987.

Table 1

Demographics Summary Regression Analysis

Equation 1 -	Indep Var	Beta	R	adj R-sq
Dep: Perry Scheme Score	A. ENTERa			
	Grade	.39*	.53*	.20
	Age	.20		
	Sex	.09		
	Major: Bus	-.14		
	Major: Eng	.11		
	B. BACKWARDb			
	Grade	.46*	.46*	.20

Equation 2 -	Indep Var	Beta	R	adj R-sq
Dep: Paper Score - Friendly	A. ENTERa			
	Grade	.33*	.49*	.16
	Age	.21		
	Sex	.09		
	Major: Bus	-.15		
	Major: Eng	-.04		
	B. BACKWARDb			
	Grade	.42*	.42*	.16
	C. ENTERa			
	Perry Scheme	.42*	.56*	.29
	Grade	.22		

Equation 3 -	Indep Var	Beta	R	adj R-sq
Dep: Paper Score - Hostile	A. ENTERa			
	Grade	.37*	.53*	.20
	Age	.25		
	Sex	.10		
	Major: Bus	-.11		
	Major: Eng	-.01		
	B. BACKWARDb			
	Grade	.46*	.46*	.20
	C. ENTERa			
	Perry Scheme	.53*	.66*	.41
	Grade	.22		

* Significant $p <= .05$
a Probability of F-to-enter <=.025 and Tolerance >= .2
b Probability of F-to-remove <=.05

Table 2

Audience Summary Regression Analysis

Equation 1 -	Indep Var	Beta	R	adj R-sq
Dep: Perry Scheme Score	A. ENTERa			
	Stra-Fr	<.01		
	Stra-Hos	.29*		
	Resp-Fr	.26	.57*	.23
	Resp-Hos	.29*		
	Neg-Fr	-.14		
	Neg-Hos	-.01		
	B. BACKWARDb			
	Stra-Hos	.32*		
	Resp-Hos	.38*	.50*	.22
Equation 2 -	Indep Var	Beta	R	adj R-sq
Dep: Paper Score - Friendly	A. ENTERa			
	Stra-Fr	.23		
	Stra-Hos	.23		
	Resp-Fr	.16	.58*	.26
	Resp-Hos	.23		
	Neg-Fr	-.13		
	Neg-Hos	-.09		
	B. BACKWARDb			
	Stra-Fr	.28*		
	Stra-Hos	.26*		
	Resp-Hos	.31*	.55*	.26
Equation 3 -	Indep Var	Beta	R	adj R-sq
Dep: Paper Score - Hostile	A. ENTERa			
	Stra-Fr	-.02		
	Stra-Hos	.21		
	Resp-Fr	.09	.75*	.50
	Resp-Hos	.53*		
	Neg-Fr	-.09		
	Neg-Hos	-.21		
	B. BACKWARDb			
	Stra-Hos	.28*		
	Resp-Hos	.65*	.71*	.49

* Significant p <=.05
a Probability of F-to-enter <=.025 and Tolerance >= .2
b Probability of F-to-remove <=.05

Table 3

Final Model Summary Regression Analysis

Equation 1 -	Indep Var	Beta	R	adj R-sq
Dep: Paper Score - Friendly	A. ENTERa			
	Perry Scheme	.30*	.64*	.33
	Grade	.12		
	Stra-Fr	.22		
	Stra-Hos	.13		
	Resp-Fr	.06		
	Resp-Hos	.18		
	B. BACKWARDb			
	Perry Scheme	.48*	.60*	.33
	Stra-Fr	.29*		

Equation 2 -	Indep Var	Beta	R	adj R-sq
Dep: Paper Score - Hostile	A. ENTERa			
	Perry Scheme	.28*	.82*	.62
	Grade	.26*		
	Stra-Fr	-.04		
	Stra-Hos	.10		
	Resp-Fr	-.03		
	Resp-Hos	.53*		
	B. BACKWARDb			
	Perry Scheme	.31*	.81*	.63
	Grade	.27*		
	Resp-Hos	.51*		

* Significant p <=.05
a Probability of F-to-enter <=.025 and Tolerance >= .2
b Probability of F-to-remove <=.05

Figure 1 Variables Used in Regression Analyses

Dependent Variables	Definition
Perry Scheme score	Syracuse Rating Group's rating of essays for level of Perry Scheme performance
Score fr	Holistic paper-rating for the friendly-audience paper
Score hos	Holistic paper-rating for the hostile-audience paper

Independent Variables: Demographic	Definition
Grade	Subject's educational level in high school or college
Age	Subject's chronological age
Sex	Subject's gender
Major: LAS	Subjects enrolled or planning to enroll in a college of letters, arts and science
Major: Bus	Subjects enrolled or planning to enroll in a college of business
Major: Eng	Subjects enrolled or planning to enroll in a college of engineering

Independent Variables: Audience Moves	Definition
Strategy-fr } *	Audience-coding scores for activity in the strategy category, friendly-audience paper
Strategy-hos	Audience-coding scores for activity in the strategy category, hostile-audience paper
Response-fr } *	Audience-coding scores for activity in the response category, friendly-audience paper
Response-hos	Audience-coding scores for activity in the response category, hostile-audience paper
Negative-fr } *	Audience-coding scores in the negative category, friendly-audience paper
Negative-hos	Audience-coding scores in the negative category, hostile-audience paper

*Entered as a pair in all equations.